IN THE CLAIMS:

Please find below a listing of all of the pending claims. The statuses of the claims are set forth in parentheses.

1. (Previously presented) A method of transform-based encoding of digital video content, said digital video content comprising a stream of pictures, slices, or macroblocks, each of which are at least one of intra, predicted or bi-predicted pictures, slices, or macroblocks, in the form of blocks of pixels forming a two dimensional array of two dimensional array frequency coefficients including high-energy low frequency coefficients and low-energy high frequency coefficients, said method comprising:

said scanning two dimensional array frequency coefficients, from each of said blocks, in a manner that is vertically biased and producing a one dimensional array of one dimensional array frequency coefficients, wherein the high-energy low frequency coefficients are scanned before the low-energy high frequency coefficients; and

wherein when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, said method further comprises:

representing said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column;

representing said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row; and

performing encoding of the digital video content by sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 15 and producing said one dimensional array of said one dimensional array frequency coefficients wherein said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner comprises:

assigning a scanning order = 0 for a two dimensional array frequency

coefficient located at n=0 and m=0;

assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=l;

assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3

assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=l;

assigning a scanning order 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=3 and m=2 ; and

assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=3.

2-3. (Canceled).

4. (Previously presented) The method of claim 1, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, said method further comprises:

representing said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column;

representing said rows with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row; and

sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31 and producing said one dimensional array of said one dimensional array frequency coefficients.

5. (Previously presented) The method of claim 4, wherein said step of sequential scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients comprises:

assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=0 and m=4;

assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=0 and m=5;

assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=0 and m=6;

assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=0 and m=7;

assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=1 and m=4;

assigning a scanning order = 16 for a two dimensional array frequency coefficient located at n=1 and m=5;

assigning a scanning order = 17 for a two dimensional array frequency coefficient located at n=1 and m=6;

assigning a scanning order = 18 for a two dimensional array frequency coefficient located at n=1 and m=7;

assigning a scanning order = 19 for a two dimensional array frequency coefficient

located at n=2 and m=3;

assigning a scanning order = 20 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigning a scanning order = 21 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigning a scanning order = 22 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigning a scanning order = 23 for a two dimensional array frequency coefficient located at n=2 and m=4;

assigning a scanning order = 24 for a two dimensional array frequency coefficient located at n=2 and m=5;

assigning a scanning order = 25 for a two dimensional array frequency coefficient located at n=2 and m=6;

assigning a scanning order = 26 for a two dimensional array frequency coefficient located at n=2 and m=7;

assigning a scanning order = 27 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigning a scanning order = 28 for a two dimensional array frequency coefficient located at n=3 and m=4;

assigning a scanning order = 29 for a two dimensional array frequency coefficient located at n=3 and m=5;

assigning a scanning order = 30 for a two dimensional array frequency coefficient located at n=3 and m=6; and

assigning a scanning order = 31 for a two dimensional array frequency coefficient located at n=3 and m=7.

6. (Previously presented) The method of claim 1, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, said method further comprises:

representing said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is

a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column;

representing said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row; and

sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31 and producing said one dimensional array of said one dimensional array frequency coefficients.

7. (Previously presented) The method of claim 6, wherein said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients comprises:

assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=4 and m=0;

assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigning a scanning order = 16 for a two dimensional array frequency coefficient located at n=3 and m=3

assigning a scanning order = 17 for a two dimensional array frequency coefficient located at n=4 and m=1;

assigning a scanning order = 18 for a two dimensional array frequency coefficient located at n=5 and m=0;

assigning a scanning order = 19 for a two dimensional array frequency coefficient located at n=4 and m=2;

assigning a scanning order = 20 for a two dimensional array frequency coefficient located at n=4 and m=3;

assigning a scanning order = 21 for a two dimensional array frequency coefficient located at n=5 and m=1;

assigning a scanning order = 22 for a two dimensional array frequency coefficient located at n=6 and m=0;

assigning a scanning order = 23 for a two dimensional array frequency coefficient

located at n=5 and m=2;

assigning a scanning order = 24 for a two dimensional array frequency coefficient located at n=5 and m=3;

assigning a scanning order = 25 for a two dimensional array frequency coefficient located at n=6 and m=1;

assigning a scanning order = 26 for a two dimensional array frequency coefficient located at n=7 and m=0;

assigning a scanning order = 27 for a two dimensional array frequency coefficient located at n=6 and m=2;

assigning a scanning order = 28 for a two dimensional array frequency coefficient located at n=6 and m=3;

assigning a scanning order = 29 for a two dimensional array frequency coefficient located at n=7 and m=1;

assigning a scanning order = 30 for a two dimensional array frequency coefficient located at n=7 and m=2; and

assigning a scanning order = 31 for a two dimensional array frequency coefficient located at n=7 and m=3.

8. (Currently amended) The method of claim 1, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, said method further comprises:

representing said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and [[n7]] n=7 is at least one of an eighth or rightmost column;

representing said rows with a variable m=0, 1, 2, 3, 4, 5, 6, 7, or 8, wherein [[m0]] m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row; and

sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential

scanning order starting at 0 and ending at 63 and producing said one dimensional array of said one dimensional array frequency coefficients.

9. (Currently amended) The method of claim 8, wherein said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients comprises:

assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=0 and m=4;

assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=0 and m=5;

assigning a scanning order = 11 for a two dimensional array frequency coefficient

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located at n=0 and m=6;

assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=0 and m=7;

assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=1 and m=4;

assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=2 and m=l;

assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigning a scanning order = 16 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigning a scanning order = 17 for a two dimensional array frequency coefficient located at n=l and m=5;

assigning a scanning order = 18 for a two dimensional array frequency coefficient located at n=1 and m=6;

assigning a scanning order = 19 for a two dimensional array frequency coefficient located at n=1 and m=7;

assigning a scanning order = 20 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigning a scanning order = 21 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigning a scanning order = 22 for a two dimensional array frequency coefficient located at n=4 and m=0;

assigning a scanning order = 23 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigning a scanning order = 24 for a two dimensional array frequency coefficient located at n=2 and m=4;

assigning a scanning order = 25 for a two dimensional array frequency coefficient located at n=2 and m=5;

assigning a scanning order = 26 for a two dimensional array frequency coefficient located at n=2 and m=6;

assigning a scanning order = 27 for a two dimensional array frequency coefficient located at n=2 and m=7;

assigning a scanning order = 28 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigning a scanning order = 29 for a two dimensional array frequency coefficient located n=4 and m=l;

assigning a scanning order = 30 for a two dimensional array frequency coefficient located at n=5 and m=0;

assigning a scanning order = 31 for a two dimensional array frequency coefficient located at n=4 and m=2;

assigning a scanning order = 32 for a two dimensional array frequency coefficient located at n=3 and m=4;

assigning a scanning order = 33 for a two dimensional array frequency coefficient located at n=3 and m=5;

assigning a scanning order = 34 for a two dimensional array frequency coefficient located at n=3 and m=6;

assigning a scanning order = 35 for a two dimensional array frequency coefficient located at n=3 and m=7;

assigning a scanning order = 36 for a two dimensional array frequency coefficient located at n=4 and m=3;

assigning a scanning order = 37 for a two dimensional array frequency coefficient located at n=5 and m=1;

assigning a scanning order = 38 for a two dimensional array frequency coefficient located at n=6 and m=0;

assigning a scanning order = 39 for a two dimensional array frequency coefficient located n=5 and m=2;

assigning a scanning order = 40 for a two dimensional array frequency coefficient located at n=4 and m=4;

assigning a scanning order = 41 for a two dimensional array frequency coefficient located at n=4 and m=5;

assigning a scanning order = 42 for a two dimensional array frequency coefficient

located at n=4 and m=6;

assigning a scanning order = 43 for a two dimensional array frequency coefficient located at n=4 and m=7;

assigning a scanning order = 44 for a two dimensional array frequency coefficient located at n=5 and m=3;

assigning a scanning order = 45 for a two dimensional array frequency coefficient located at n=6 and m=1;

assigning a scanning order = 46 for a two dimensional array frequency coefficient located at n=6 and m=2;

assigning a scanning order = 47 for a two dimensional array frequency coefficient located at n=5 and m=4;

assigning a scanning order = 48 for a two dimensional array frequency coefficient located at n=5 and m=5;

assigning a scanning order = 49 for a two dimensional array frequency coefficient located n=5 and m=6;

assigning a scanning order = 50 for a two dimensional array frequency coefficient located at n=5 and m=7;

assigning a scanning order = 51 for a two dimensional array frequency coefficient located at n=6 and m=3 [[m=4]];

assigning a scanning order = 52 for a two dimensional array frequency coefficient located at n=7 and m=0;

assigning a scanning order = 53 for a two dimensional array frequency coefficient located at n=7 and m=1;

assigning a scanning order =54 for a two dimensional array frequency coefficient located at n=6 and m=4;

assigning a scanning order = 55 for a two dimensional array frequency coefficient located at n=6 and m=5;

assigning a scanning order = 56 for a two dimensional array frequency coefficient located at n=6 and m=6;

assigning a scanning order = 57 for a two dimensional array frequency coefficient located at n=6 and m=7;

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assigning a scanning order = 58 for a two dimensional array frequency coefficient located at n=7 and m=2;

assigning a scanning order = 59 for a two dimensional array frequency coefficient located n=7 and m=3;

assigning a scanning order = 60 for a two dimensional array frequency coefficient located at n=7 and m=4;

assigning a scanning order = 61 for a two dimensional array frequency coefficient located at n=7 and m=5;

assigning a scanning order = 62 for a two dimensional array frequency coefficient located at n=7 and m=6;

assigning a scanning order = 63 for a two dimensional array frequency coefficient located at n=7 and m=7.

10-18. (Canceled)

19. (Previously presented) A device comprising;

an encoder configured to perform transform-based encoding of digital video content, said digital video content comprising a stream of pictures, slices, or macroblocks which are at least one of intra, predicted or hi-predicted pictures, slices, or macroblocks, in the form of blocks of pixels forming a two dimensional array of two dimensional array frequency coefficients including high-energy low frequency coefficients and low-energy high frequency coefficients, wherein said encoder scans said two dimensional array frequency coefficients, from each of said blocks, in a manner that is vertically biased and producing a one dimensional array of one dimensional array frequency coefficients and, wherein the high-energy low frequency coefficients are scanned before the low-energy high frequency coefficients, wherein when said two dimensional array of said two dimensional array frequency coefficients comprises four columns of frequency coefficients and four rows of frequency coefficients, said encoder:

represents said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column; and

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represents said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row;

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 15 and producing said one dimensional array of said one dimensional array frequency coefficients, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner, said encoder:

assigns a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigns a scanning order = 1 for a two dimensional array frequency coefficient located at n = 0 and m = 1;

assigns a scanning order = 2 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigns a scanning order = 3 for a two dimensional array frequency coefficient located at n= 0 and m=2;

assigns a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigns a scanning order = 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigns a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigns a scanning order = 8 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order = 10 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order = 11 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigns a scanning order = 12 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order = 14 for a two dimensional array frequency coefficient located at n=3 and m=2; and

assigns a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=3.

20-21. (Canceled).

22. (Previously presented) The device of claim 19, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises four columns of frequency coefficients and eight rows of frequency coefficients, said encoder:

represents said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column; and

represents said rows with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row;

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31 and producing said one dimensional array of said one dimensional array frequency coefficients.

23. (Previously presented) The device of claim 22, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises four

columns of frequency coefficients and eight rows of frequency coefficients, said encoder:

assigns a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigns a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigns a scanning order = 2 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigns a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order = 4 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigns a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigns a scanning order = 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigns a scanning order = 7 for a two dimensional array frequency coefficient located at n=0 and m=4;

assigns a scanning order = 8 for a two dimensional array frequency coefficient located at n=0 and m=5;

assigns a scanning order = 9 for a two dimensional array frequency coefficient located at n=0 and m=6;

assigns a scanning order = 10 for a two dimensional array frequency coefficient located at n=0 and m=7;

assigns a scanning order = 11 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigns a scanning order = 12 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order = 13 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order = 14 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order = 15 for a two dimensional array frequency coefficient located at n=1 and m=4;

assigns a scanning order = 16 for a two dimensional array frequency coefficient located at n=1 and m=5;

assigns a scanning order = 17 for a two dimensional array frequency coefficient located at n=1 and m=6;

assigns a scanning order = 18 for a two dimensional array frequency coefficient located at n=1 and m=7;

assigns a scanning order = 19 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigns a scanning order = 20 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order = 21 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order = 22 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigns a scanning order = 23 for a two dimensional array frequency coefficient located at n=2 and m=4;

assigns a scanning order = 24 for a two dimensional array frequency coefficient located at n=2 and m=5;

assigns a scanning order = 25 for a two dimensional array frequency coefficient located at n=2 and m=6;

assigns a scanning order = 26 for a two dimensional array frequency coefficient located at n=2 and m=7;

assigns a scanning order = 27 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigns a scanning order = 28 for a two dimensional array frequency coefficient located at n=3 and m=4;

assigns a scanning order = 29 for a two dimensional array frequency coefficient located at n=3 and m=5;

assigns a scanning order = 30 for a two dimensional array frequency coefficient

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located at n=3 and m=6; and

assigns a scanning order = 31 for a two dimensional array frequency coefficient located at n=3 and m=7.

24. (Previously presented) The device of claim 19, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises eight columns of frequency coefficients and four rows of frequency coefficients, said encoder:

represents said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column; and

represents said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m= 1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row;

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31 and producing said one dimensional array of said one dimensional array frequency coefficients.

25. (Previously presented) The device of claim 24, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises eight columns of frequency coefficients and four rows of frequency coefficients, said encoder:

assigns a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigns a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigns a scanning order = 2 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigns a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=2;

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assigns a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=l;

assigns a scanning order = 6 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigns a scanning order = 8 for a two dimensional array frequency coefficient located at n=l and m=3;

assigns a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order = 10 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order = 11 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order = 12 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigns a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order = 14 for a two dimensional array frequency coefficient located at n=4 and m=0;

assigns a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigns a scanning order = 16 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigns a scanning order = 17 for a two dimensional array frequency coefficient located at n=4 and m=1;

assigns a scanning order = 18 for a two dimensional array frequency coefficient located at n=5 and m=0;

assigns a scanning order = 19 for a two dimensional array frequency coefficient

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located at n=4 and m=2;

assigns a scanning order = 20 for a two dimensional array frequency coefficient located at n=4 and m=3;

assigns a scanning order = 21 for a two dimensional array frequency coefficient located at n=5 and m=1;

assigns a scanning order = 22 for a two dimensional array frequency coefficient located at n=6 and m=0;

assigns a scanning order = 23 for a two dimensional array frequency coefficient located at n=5 and m=2;

assigns a scanning order = 24 for a two dimensional array frequency coefficient located at n=5 and m=3;

assigns a scanning order = 25 for a two dimensional array frequency coefficient located at n=6 and m=1;

assigns a scanning order = 26 for a two dimensional array frequency coefficient located at n=7 and m=0;

assigns a scanning order = 27 for a two dimensional array frequency coefficient located at n=6 and m=2;

assigns a scanning order = 28 for a two dimensional array frequency coefficient located at n=6 and m=3;

assigns a scanning order = 29 for a two dimensional array frequency coefficient located at n=7 and m=l;

assigns a scanning order = 30 for a two dimensional array frequency coefficient located at n=7 and m=2; and

assigns a scanning order = 31 for a two dimensional array frequency coefficient located at n=7 and m=3.

26. (Previously presented) The device of claim 19, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises eight columns of frequency coefficients and eight rows of frequency coefficients, said encoder:

represents said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is

a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column; and

represents said rows with a variable m=0, 1, 2, 3, 4, 5, 6, 7, or 8, wherein m=O is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row;

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 63 and producing said one dimensional array of said one dimensional array frequency coefficients.

27. (Currently Amended) The device of claim 26, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises eight columns of frequency coefficients and eight rows of frequency coefficients, said encoder:

assigns a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigns a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigns a scanning order = 2 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigns a scanning order = 3 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigns a scanning order = 4 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigns a scanning order = 5 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order = 6 for a two dimensional array frequency coefficient located at n=0 and m=4;

assigns a scanning order=7 for a two dimensional array frequency coefficient located at n=1 and m-2;

assigns a scanning order=8 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order = 9 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigns a scanning order = 10 for a two dimensional array frequency coefficient located at n=0 and m=5;

assigns a scanning order = 11 for a two dimensional array frequency coefficient located at n=0 and m=6;

assigns a scanning order = 12 for a two dimensional array frequency coefficient located at n=0 and m=7;

assigns a scanning order = 13 for a two dimensional array frequency coefficient located at n=1 and m=4;

assigns a scanning order = 14 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order = 16 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order = 17 for a two dimensional array frequency coefficient located at n=1 and m=5;

assigns a scanning order = 18 for a two dimensional array frequency coefficient located at n=1 and m=6;

assigns a scanning order =19 for a two dimensional array frequency coefficient located at n=1 and m=7;

assigns a scanning order = 20 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigns a scanning order = 21 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order = 22 for a two dimensional array frequency coefficient located at n=4 and m=0;

assigns a scanning order = 23 for a two dimensional array frequency coefficient

located at n=3 and m=2;

assigns a scanning order = 24 for a two dimensional array frequency coefficient located at n=2 and m=4;

assigns a scanning order = 25 for a two dimensional array frequency coefficient located at n=2 and m=5;

assigns a scanning order = 26 for a two dimensional array frequency coefficient located at n=2 and m=6;

assigns a scanning order = 27 for a two dimensional array frequency coefficient located at n=2 and m=7;

assigns a scanning order = 28 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigns a scanning order = 29 for a two dimensional array frequency coefficient located at [[n4]] n=4 and m=1;

assigns a scanning order = 30 for a two dimensional array frequency coefficient located at n=5 and m=0;

assigns a scanning order = 31 for a two dimensional array frequency coefficient located at n=4 and m=2;

assigns a scanning order = 32 for a two dimensional array frequency coefficient located at n=3 and m=4;

assigns a scanning order = 33 for a two dimensional array frequency coefficient located at n=3 and m=5

assigns a scanning order = 34 for a two dimensional array frequency coefficient located at n=3 and m=6;

assigns a scanning order = 35 for a two dimensional array frequency coefficient located at n=3 and m=7;

assigns a scanning order = 36 for a two dimensional array frequency coefficient located at n=4 and m=3;

assigns a scanning order = 37 for a two dimensional array frequency coefficient located at n=5 and m=1;

assigns a scanning order = 38 for a two dimensional array frequency coefficient located at n=6 and m=0;

assigns a scanning order = 39 for a two dimensional array frequency coefficient located n=5_and m=2;

assigns a scanning order = 40 for a two dimensional array frequency coefficient located at n=4 and m=4;

assigns a scanning order = 41 for a two dimensional array frequency coefficient located at n=4 and m=5;

assigns a scanning order = 42 for a two dimensional array frequency coefficient located at n=4 and m=6;

assigns a scanning order = 43 for a two dimensional array frequency coefficient located at n=4 and m=7;

assigns a scanning order = 44 for a two dimensional array frequency coefficient located at n=5 and m=3;

assigns a scanning order = 45 for a two dimensional array frequency coefficient located at n=6 and m=1;

assigns a scanning order = 46 for a two dimensional array frequency coefficient located at n=6 and m=2;

assigns a scanning order = 47 for a two dimensional array frequency coefficient located at n=5 and m=4;

assigns a scanning order = 48 for a two dimensional array frequency coefficient located at n=5 and m=5;

assigns a scanning order = 49 for a two dimensional array frequency coefficient located at n=5_and m=6;

assigns a scanning order = 50 for a two dimensional array frequency coefficient located at n=5 and m=7;

assigns a scanning order = 51 for a two dimensional array frequency coefficient located at n=6 and m=3 [[m=4]];

assigns a scanning order = 52 for a two dimensional array frequency coefficient located at n=7 and m=0;

assigns a scanning order = 53 for a two dimensional array frequency coefficient located at n=7 and m=1;

assigns a scanning order =54 for a two dimensional array frequency coefficient

located at n=6 and m=4;

assigns a scanning order = 55 for a two dimensional array frequency coefficient located at n=6 and m=5;

assigns a scanning order = 56 for a two dimensional array frequency coefficient located at n=6 and m=6;

assigns a scanning order = 57 for a two dimensional array frequency coefficient located at n=6 and m=7;

assigns a scanning order = 58 for a two dimensional array frequency coefficient located at n=7 and m=2;

assigns a scanning order = 59 for a two dimensional array frequency coefficient located at n=7 and m=3;

assigns a scanning order = 60 for a two dimensional array frequency coefficient located at n=7 and m=4;

assigns a scanning order = 61 for a two dimensional array frequency coefficient located at n=7 and m=5;

assigns a scanning order = 62 for a two dimensional array frequency coefficient located at n=7 and m=6; and

assigns a scanning order =63 for a two dimensional array frequency coefficient located at n=7 and m=7;

28. (Previously presented) A device comprising:

a decoder configured to perform transform-based decoding of encoded digital video content, said digital video content comprising a stream of pictures, slices, or macroblocks which are at least one of intra, predicted or bi-predicted pictures, slices, or macroblocks, in the form of blocks of pixels forming a one dimensional array of one dimensional array frequency coefficients including high-energy low frequency coefficients and low-energy high frequency coefficients, wherein said decoder scans said one dimensional array frequency coefficients in a numerical sequential order, producing a two dimensional array of two dimensional array frequency coefficients and, wherein the high-energy low frequency coefficients are scanned before the low-energy high frequency coefficients, wherein when said one dimensional array of said one dimensional array frequency coefficients comprises

sixteen one dimensional array frequency coefficients, said decoder:

represents said sixteen one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15; and

sequentially scans said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning order starting at p=0 and ending at p=15 and producing said two dimensional array of said two dimensional array frequency coefficients, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients, said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p = 0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p = 1;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p = 2;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p = 3;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p = 4;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p = 5;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p = 6;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p = 7;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p = 8;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p = 9;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p = 10;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p = 11;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p = 12;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p = 13;

assigns a two dimensional array frequency coefficient located at n=3

and m=2 a value of said one dimensional array frequency coefficient located at p = 14; and

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p = 15.

29-30. (Canceled).

31. (Previously presented) The device of claim 28, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, said decoder:

represents said thirty-two one dimensional array frequency coefficients with a variable p=0, 1,2,3,4,5,6,7,8,9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31;

wherein said decoder sequentially scans said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning order starting at p=0 and ending at p=31 and producing said two dimensional array of said two dimensional array frequency coefficients.

32. (Previously presented) The device of claim 31, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, wherein in sequentially scanning said one

dimensional array frequency coefficients, said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p = 0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p = 1;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p = 2;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p = 3;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p = 4;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p = 5;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p = 6;

assigns a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p = 7;

assigns a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p = 8;

assigns a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=9;

assigns a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p = 10;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p = 11;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p = 12;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p = 13;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p = 14;

assigns a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p = 15;

assigns a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p = 16;

assigns a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p = 17;

assigns a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p = 18;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p = 19;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p = 20;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p = 21;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p = 22;

assigns a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p = 23;

assigns a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p = 24;

assigns a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p = 25;

assigns a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p = 26;

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p = 27;

assigns a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p = 28;

assigns a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p = 29;

assigns a two dimensional array frequency coefficient located at n=3 and m=6 a value

of said one dimensional array frequency coefficient located at p = 30; and

assigns a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p = 31.

33. (canceled)

34. (Previously presented) The device of claim 31, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients, said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p = 0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p = 1;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p = 2;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p = 3;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p = 4;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p = 5;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p = 6;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value

of said one dimensional array frequency coefficient located at p = 7;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p = 8;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p = 9;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p = 10;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p = 11;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p = 12;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p = 13;

assigns a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p = 14;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p = 15;

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p = 16;

assigns a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p = 17;

assigns a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p = 18;

assigns a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p = 19;

assigns a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p = 20;

assigns a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p = 21;

assigns a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p = 22;

assigns a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p = 23;

assigns a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p = 24;

assigns a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p = 25;

assigns a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p = 26;

assigns a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p = 27;

assigns a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p = 28;

assigns a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p = 29;

assigns a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p = 30; and

assigns a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p = 31.

35. (Previously presented) The device of claim 28, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one dimensional array frequency coefficients, said decoder:

represents said sixty-four one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63;

wherein said decoder sequentially scans said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning order starting at p=0 and ending at p=63 and producing said two dimensional array

of said two dimensional array frequency coefficients.

36. (Previously presented) The device of claim 35, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients, said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p = 0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p = 1;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p = 2;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p = 3;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p = 4;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p = 5;

assigns a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p = 6;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p = 7;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p = 8;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p = 9;

assigns a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p = 10;

assigns a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p = 11;

assigns a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p = 12;

assigns a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p = 13;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p = 14;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p = 15;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p = 16;

assigns a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p = 17;

assigns a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p = 18;

assigns a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p = 19;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p = 20;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p = 21;

assigns a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p = 22;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p = 23;

assigns a two dimensional array frequency coefficient located at n=2 and m=4 a value

of said one dimensional array frequency coefficient located at p = 24;

assigns a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p = 25;

assigns a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p = 26;

assigns a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p = 27;

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p = 28;

assigns a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p = 29;

assigns a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p = 30;

assigns a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p = 31;

assigns a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p = 32;

assigns a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p = 33;

assigns a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p = 34;

assigns a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p = 35;

assigns a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p = 36;

assigns a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p = 37;

assigns a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p = 38;

assigns a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p = 39;

assigns a two dimensional array frequency coefficient located at n=4 and m=4 a value of said one dimensional array frequency coefficient located at p = 40;

assigns a two dimensional array frequency coefficient located at n=4 and m=5 a value of said one dimensional array frequency coefficient located at p = 41;

assigns a two dimensional array frequency coefficient located at n=4 and m=6 a value of said one dimensional array frequency coefficient located at p = 42;

assigns a two dimensional array frequency coefficient located at n=4 and m=7 a value of said one dimensional array frequency coefficient located at p = 43;

assigns a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p = 44;

assigns a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p = 45;

assigns a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p = 46;

assigns a two dimensional array frequency coefficient located at n=5 and m=4 a value of said one dimensional array frequency coefficient located at p = 47;

assigns a two dimensional array frequency coefficient located at n=5 and m=5 a value of said one dimensional array frequency coefficient located at p = 48;

assigns a two dimensional array frequency coefficient located at n=5 and m=6 a value of said one dimensional array frequency coefficient located at p = 49;

assigns a two dimensional array frequency coefficient located at n=5 and m=7 a value of said one dimensional array frequency coefficient located at p = 50;

assigns a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p = 51;

assigns a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p = 52;

assigns a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p = 53;

assigns a two dimensional array frequency coefficient located at n=6 and m=4 a value of said one dimensional array frequency coefficient located at p = 54;

assigns a two dimensional array frequency coefficient located at n=6 and m=5 a value

of said one dimensional array frequency coefficient located at p = 55;

assigns a two dimensional array frequency coefficient located at n=6 and m=6 a value of said one dimensional array frequency coefficient located at p = 56;

assigns a two dimensional array frequency coefficient located at n=6 and m=7 a value of said one dimensional array frequency coefficient located at p = 57;

assigns a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p = 58;

assigns a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p = 59;

assigns a two dimensional array frequency coefficient located at n=7 and m=4 a value of said one dimensional array frequency coefficient located at p = 60;

assigns a two dimensional array frequency coefficient located at n=7 and m=5 a value of said one dimensional array frequency coefficient located at p = 61;

assigns a two dimensional array frequency coefficient located at n=7 and m=6 a value of said one dimensional array frequency coefficient located at p = 62; and

assigns a two dimensional array frequency coefficient located at n=7 and m=7 a value of said one dimensional array frequency coefficient located at p = 63.

37. (Previously Presented) A transform-based encoding system for encoding digital video content, said digital video content comprising a stream of pictures, slices, or macroblocks each of which are at least one of intra, predicted or bi-predicted pictures, slices, or macroblocks, in the form of blocks of pixels forming a two dimensional array of two dimensional array frequency coefficients including high-energy low frequency coefficients and low-energy high frequency coefficients, said system comprising:

means for sequentially scanning said two dimensional array frequency coefficients from each of said blocks in a manner that is vertically biased, wherein the high-energy low frequency coefficients are scanned before the low-energy high frequency coefficients; and

means for producing a one dimensional array of one dimensional array frequency coefficients, wherein when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, said system further comprises:

means for representing said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column;

means for representing said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row; and

means for sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said scanning order starting at 0 and ending at 15, wherein said means for sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner further comprises:

means for assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

means for assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

means for assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=1 and m=0;

means for assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=2;

means for assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3;

means for assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

means for assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

means for assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=3;

means for assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=2 and m=0;

means for assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

means for assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=2 and m=2;

means for assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=2 and m=3;

means for assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=3 and m=0;

means for assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=l;

means for assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=3 and m=2; and

means for assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=3.

38-39. (Canceled).

40. (Previously presented) The system of claim 37, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, said system further comprises:

means for representing said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=l is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column;

means for representing said rows with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row; and

means for sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31.

41. (Previously presented) The system of claim 40, wherein said means for sequentially scanning said two dimensional array frequency coefficients in a vertically biased

manner when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients further comprises:

means for assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

means for assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

means for assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=0 and m=2;

means for assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=3;

means for assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=1 and m=0;

means for assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

means for assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

means for assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=0 and m=4;

means for assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=0 and m=5;

means for assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=0 and m=6;

means for assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=0 and m=7;

means for assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=1 and m=3;

means for assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=2 and m=0;

means for assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=2 and m=l;

means for assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=2 and m=2;

means for assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=1 and m=4;

means for assigning a scanning order = 16 for a two dimensional array frequency coefficient located at n=1 and m=5;

means for assigning a scanning order = 17 for a two dimensional array frequency coefficient located at n=1 and m=6;

means for assigning a scanning order = 18 for a two dimensional array frequency coefficient located at n=1 and m=7;

means for assigning a scanning order = 19 for a two dimensional array frequency coefficient located at n=2 and m=3;

means for assigning a scanning order = 20 for a two dimensional array frequency coefficient located at n=3 and m=0;

means for assigning a scanning order = 21 for a two dimensional array frequency coefficient located at n=3 and m=1;

means for assigning a scanning order = 22 for a two dimensional array frequency coefficient located at n=3 and m=2;

means for assigning a scanning order = 23 for a two dimensional array frequency coefficient located at n=2 and m=4;

means for assigning a scanning order = 24 for a two dimensional array frequency coefficient located at n=2 and m=5;

means for assigning a scanning order = 25 for a two dimensional array frequency coefficient located at n=2 and m=6;

means for assigning a scanning order = 26 for a two dimensional array frequency coefficient located at n=2 and m=7;

means for assigning a scanning order = 27 for a two dimensional array frequency coefficient located at n=3 and m=3;

means for assigning a scanning order = 28 for a two dimensional array frequency coefficient located at n=3 and m=4;

means for assigning a scanning order = 29 for a two dimensional array frequency

coefficient located at n=3 and m=5;

means for assigning a scanning order = 30 for a two dimensional array frequency coefficient located at n=3 and m=6 ; and

means for assigning a scanning order = 31 for a two dimensional array frequency coefficient located at n=3 and m=7.

42. (Previously presented) The system of claim 37, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, said system further comprises:

means for representing said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column;

means for representing said rows with a variable m=0, 1, 2, or 3, wherein m0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row; and

means for sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31.

43. (Previously presented) The system of claim 42, wherein said means for sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients further comprises:

means for assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

means for assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=l;

means for assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=1 and m=0;

means for assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=2;

means for assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3;

means for assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=1 and m=1;

means for assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=2 and m=0;

means for assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=2;

means for assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=1 and m=3;

means for assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

means for assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=3 and m=0;

means for assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=2 and m=2;

means for assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=2 and m=3;

means for assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=1;

means for assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=4 and m=0;

means for assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=2;

means for assigning a scanning order = 16 for a two dimensional array frequency coefficient located at n=3 and m=3;

means for assigning a scanning order = 17 for a two dimensional array frequency coefficient located at n=4 and m=1;

means for assigning a scanning order = 18 for a two dimensional array frequency

coefficient located at n=5 and m=0;

means for assigning a scanning order = 19 for a two dimensional array frequency coefficient located at n=4 and m=2;

means for assigning a scanning order = 20 for a two dimensional array frequency coefficient located at n=4 and m=3;

means for assigning a scanning order = 21 for a two dimensional array frequency coefficient located at n=5 and m=1;

means for assigning a scanning order = 22 for a two dimensional array frequency coefficient located at n=6 and m=0;

means for assigning a scanning order = 23 for a two dimensional array frequency coefficient located at n=5 and m=2;

means for assigning a scanning order = 24 for a two dimensional array frequency coefficient located at n=5 and m=3;

means for assigning a scanning order = 25 for a two dimensional array frequency coefficient located at n=6 and m=l;

means for assigning a scanning order = 26 for a two dimensional array frequency coefficient located at n=7 and m=0;

means for assigning a scanning order = 27 for a two dimensional array frequency coefficient located at n=6 and m=2;

means for assigning a scanning order = 28 for a two dimensional array frequency coefficient located at n=6 and m=3;

means for assigning a scanning order = 29 for a two dimensional array frequency coefficient located at n=7 and m=l;

means for assigning a scanning order = 30 for a two dimensional array frequency coefficient located at n=7 and m=2 ; and

means for assigning a scanning order = 31 for a two dimensional array frequency coefficient located at n=7 and m=3.

44. (Previously presented) The system of claim 37, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, said system further comprises:

means for representing said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column;

means for representing said rows with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row; and

means for sequentially scanning said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 63.

45. (Previously presented) The system of claim 44, wherein said means for sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients further comprises:

means for assigning a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

means for assigning a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

means for assigning a scanning order = 2 for a two dimensional array frequency coefficient located at n=0 and m=2;

means for assigning a scanning order = 3 for a two dimensional array frequency coefficient located at n=1 and m=0;

means for assigning a scanning order = 4 for a two dimensional array frequency coefficient located at n=1 and m=1;

means for assigning a scanning order = 5 for a two dimensional array frequency coefficient located at n=0 and m=3;

means for assigning a scanning order = 6 for a two dimensional array frequency coefficient located at n=0 and m=4;

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means for assigning a scanning order = 7 for a two dimensional array frequency coefficient located at n=1 and m=2;

means for assigning a scanning order = 8 for a two dimensional array frequency coefficient located at n=2 and m=0;

means for assigning a scanning order = 9 for a two dimensional array frequency coefficient located at n=1 and m=3;

means for assigning a scanning order = 10 for a two dimensional array frequency coefficient located at n=0 and m=5;

means for assigning a scanning order = 11 for a two dimensional array frequency coefficient located at n=0 and m=6;

means for assigning a scanning order = 12 for a two dimensional array frequency coefficient located at n=0 and m=7;

means for assigning a scanning order = 13 for a two dimensional array frequency coefficient located at n=1 and m=4;

means for assigning a scanning order = 14 for a two dimensional array frequency coefficient located at n=2 and m=1;

means for assigning a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=0;

means for assigning a scanning order = 16 for a two dimensional array frequency coefficient located at n=2 and m=2;

means for assigning a scanning order = 17 for a two dimensional array frequency coefficient located at n=1 and m=5;

means for assigning a scanning order = 18 for a two dimensional array frequency coefficient located at n=1 and m=6;

means for assigning a scanning order = 19 for a two dimensional array frequency coefficient located at n=1 and m=7;

means for assigning a scanning order = 20 for a two dimensional array frequency coefficient located at n=2 and m=3;

means for assigning a scanning order = 21 for a two dimensional array frequency coefficient located at n=3 and m=l;

means for assigning a scanning order = 22 for a two dimensional array frequency

coefficient located at n=4 and m=0;

     means for assigning a scanning order = 23 for a two dimensional array frequency coefficient located at n=3 and m=2;

     means for assigning a scanning order = 24 for a two dimensional array frequency coefficient located at n=2 and m=4;

     means for assigning a scanning order = 25 for a two dimensional array frequency coefficient located at n=2 and m=5;

     means for assigning a scanning order = 26 for a two dimensional array frequency coefficient located at n=2 and m=6;

     means for assigning a scanning order = 27 for a two dimensional array frequency coefficient located at n=2 and m=7;

     means for assigning a scanning order = 28 for a two dimensional array frequency coefficient located at n=3 and m=3;

     means for assigning a scanning order = 29 for a two dimensional array frequency coefficient located at n=4 and m=l;

     means for assigning a scanning order = 30 for a two dimensional array frequency coefficient located at n=5 and m=0;

     means for assigning a scanning order = 31 for a two dimensional array frequency coefficient located at n=4 and m=2;

     means for assigning a scanning order = 32 for a two dimensional array frequency coefficient located at n=3 and m=4;

     means for assigning a scanning order = 33 for a two dimensional array frequency coefficient located at n=3 and m=5;

     means for assigning a scanning order = 34 for a two dimensional array frequency coefficient located at n=3 and m=6;

     means for assigning a scanning order = 35 for a two dimensional array frequency coefficient located at n=3 and m=7;

     means for assigning a scanning order = 36 for a two dimensional array frequency coefficient located at n=4 and m=3;

     means for assigning a scanning order = 37 for a two dimensional array frequency coefficient located at n=5 and m=1;

means for assigning a scanning order = 38 for a two dimensional array frequency coefficient located at n=6 and m=0;

means for assigning a scanning order = 39 for a two dimensional array frequency coefficient located at n=5 and m=2;

means for assigning a scanning order = 40 for a two dimensional array frequency coefficient located at n=4 and m=4;

means for assigning a scanning order = 41 for a two dimensional array frequency coefficient located at n=4 and m=5;

means for assigning a scanning order = 42 for a two dimensional array frequency coefficient located at n=4 and m=6;

means for assigning a scanning order = 43 for a two dimensional array frequency coefficient located at n=4 and m=7;

means for assigning a scanning order = 44 for a two dimensional array frequency coefficient located at n=5 and m=3;

means for assigning a scanning order = 45 for a two dimensional array frequency coefficient located at n=6 and m=1;

means for assigning a scanning order = 46 for a two dimensional array frequency coefficient located at n=6 and m=2;

means for assigning a scanning order = 47 for a two dimensional array frequency coefficient located at n=5 and m=4;

means for assigning a scanning order = 48 for a two dimensional array frequency coefficient located at n=5 and m=5;

means for assigning a scanning order = 49 for a two dimensional array frequency coefficient located at n=5 and m=6;

means for assigning a scanning order = 50 for a two dimensional array frequency coefficient located at n=5 and m=7;

means for assigning a scanning order = 51 for a two dimensional array frequency coefficient located at n=6 and m=3;

means for assigning a scanning order = 52 for a two dimensional array frequency coefficient located at n=7 and m=0;

means for assigning a scanning order = 53 for a two dimensional array frequency

coefficient located at n=7 and m=1;

means for assigning a scanning order = 54 for a two dimensional array frequency coefficient located at n=6 and m=4;

means for assigning a scanning order = 55 for a two dimensional array frequency coefficient located at n=6 and m=5;

means for assigning a scanning order = 56 for a two dimensional array frequency coefficient located at n=6 and m=6;

means for assigning a scanning order = 57 for a two dimensional array frequency coefficient located at n=6 and m=7;

means for assigning a scanning order = 58 for a two dimensional array frequency coefficient located at n=7 and m=2;

means for assigning a scanning order = 59 for a two dimensional array frequency coefficient located at n=7 and m=3;

means for assigning a scanning order = 60 for a two dimensional array frequency coefficient located at n=7 and m=4;

means for assigning a scanning order = 61 for a two dimensional array frequency coefficient located at n=7 and m=5;

means for assigning a scanning order = 62 for a two dimensional array frequency coefficient located at n=7 and m=6 ; and

means for assigning a scanning order = 63 for a two dimensional array frequency coefficient located at n=7 and m=7.

46. (Previously presented) The method of claim 1, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixteen one dimensional array frequency coefficients, wherein said sixteen one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15, said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner further comprises:

assigning a one dimensional array frequency coefficient located at p=0 a value of said

two dimensional array frequency coefficient located at n=0 and m=0;

assigning a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigning a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigning a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigning a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigning a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigning a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigning a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigning a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigning a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigning a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigning a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigning a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigning a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigning a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=3 and m=2; and

assigning a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=3.

47. (Previously presented) The method of claim 1, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixteen one dimensional array frequency coefficients, said method further comprises:

representing said sixteen one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15; and

sequentially scanning said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=15 and producing said two dimensional array of said two dimensional array frequency coefficients.

48. (Previously presented) The method of claim 47, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, said step of sequentially scanning said one dimensional array frequency coefficients further comprises:

assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=2;

assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=3;

assigning a two dimensional array frequency coefficient located at n=0 and m=3 a

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value of said one dimensional array frequency coefficient located at p=4;

assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=6;

assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=7;

assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=8;

assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=9;

assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=10;

assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=11;

assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=12;

assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=14; and

assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=15.

49. (Previously presented) The method of claim 5, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, wherein said thirty-two one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by

p=31, said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients further comprises:

assigning a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigning a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigning a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigning a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigning a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigning a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigning a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigning a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=0 and m=4;

assigning a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=0 and m=5;

assigning a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=0 and m=6;

assigning a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=0 and m=7;

assigning a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigning a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigning a one dimensional array frequency coefficient located at p=13 a value of

said two dimensional array frequency coefficient located at n=2 and m=1;

assigning a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigning a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=1 and m=4;

assigning a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=1 and m=5;

assigning a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=1 and m=6;

assigning a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=1 and m=7;

assigning a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigning a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigning a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigning a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigning a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=2 and m=4;

assigning a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=2 and m=5;

assigning a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=2 and m=6;

assigning a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=2 and m=7;

assigning a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigning a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=3 and m=4;

assigning a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=3 and m=5;

assigning a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=3 and m=6; and

assigning a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=3 and m=7.

50. (Previously presented) The method of claim 1, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, said method further comprises:

representing said thirty-two one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31; and

sequentially scanning said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=31 and producing said two dimensional array of said two dimensional array frequency coefficients.

51. (Previously presented) The method of claim 50, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, said step of sequentially scanning said one dimensional array frequency coefficients further comprises:

assigning a two dimensional array frequency coefficient located at n=0 and m=0 a

value of said one dimensional array frequency coefficient located at p=0;

assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=2;

assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=3;

assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=4;

assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=6;

assigning a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p=7;

assigning a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p=8;

assigning a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=9;

assigning a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p=10;

assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=11;

assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=12;

assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=14;

assigning a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p=15;

assigning a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p=16;

assigning a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p=17

assigning a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p=18;

assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=19;

assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=20;

assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=22;

assigning a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p=23;

assigning a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p=24;

assigning a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p=25;

assigning a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p=26;

assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=27;

assigning a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p=28;

assigning a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p=29;

assigning a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p=30; and

assigning a two dimensional array frequency coefficient located at n=3 and m=7 a

value of said one dimensional array frequency coefficient located at p=31.

52. (Previously presented) The method of claim 7, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, wherein said thirty-two one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31, said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients further comprises:

assigning a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigning a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigning a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigning a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigning a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigning a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigning a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigning a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigning a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigning a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigning a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigning a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigning a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigning a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigning a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=4 and m=0;

assigning a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigning a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigning a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=4 and m=1;

assigning a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=5 and m=0;

assigning a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=4 and m=2;

assigning a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=4 and m=3;

assigning a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=5 and m=1;

assigning a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=6 and m=0;

assigning a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=5 and m=2;

assigning a one dimensional array frequency coefficient located at p=24 a value of

said two dimensional array frequency coefficient located at n=5 and m=3;

assigning a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=6 and m=1;

assigning a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=7 and m=0;

assigning a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=6 and m=2;

assigning a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=6 and m=3;

assigning a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=7 and m=1;

assigning a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=7 and m=2; and

assigning a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=7 and m=3.

53. (Previously presented) The method of claim 50, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, said step of sequentially scanning said one dimensional array frequency coefficients further comprises:

assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=l;

assigning a two dimensional array frequency coefficient located at n=1 and m=0 a

value of said one dimensional array frequency coefficient located at p=2;

assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=3;

assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=4;

assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=6;

assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=7;

assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=8;

assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=9;

assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=10;

assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=11;

assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=12;

assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

assigning a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p=14;

assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=15;

assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=16;

assigning a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p=17;

assigning a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p=18;

assigning a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p=19;

assigning a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p=20;

assigning a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

assigning a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p=22;

assigning a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p=23;

assigning a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p=24;

assigning a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p=25;

assigning a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p=26;

assigning a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p=27;

assigning a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p=28;

assigning a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p=29;

assigning a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p=30 and

assigning a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p=31.

54. (Previously presented) The method of claim 9, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one

dimensional array frequency coefficients, wherein said sixty-four one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63, said step of sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients further comprises:

assigning a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigning a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigning a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigning a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigning a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigning a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigning a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=0 and m=4;

assigning a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigning a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigning a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigning a one dimensional array frequency coefficient located at p=l0 a value of

said two dimensional array frequency coefficient located at n=0 and m=5;

assigning a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=0 and m=6;

assigning a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=0 and m=7;

assigning a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=1 and m=4;

assigning a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigning a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigning a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigning a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=1 and m=5;

assigning a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=1 and m=6;

assigning a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=1 and m=7;

assigning a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigning a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigning a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=4 and m=0;

assigning a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigning a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=2 and m=4;

assigning a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=2 and m=5;

assigning a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=2 and m=6;

assigning a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=2 and m=7;

assigning a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigning a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=4 and m=1;

assigning a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=5 and m=0;

assigning a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=4 and m=2;

assigning a one dimensional array frequency coefficient located at p=32 a value of said two dimensional array frequency coefficient located at n=3 and m=4;

assigning a one dimensional array frequency coefficient located at p=33 a value of said two dimensional array frequency coefficient located at n=3 and m=5;

assigning a one dimensional array frequency coefficient located at p=34 a value of said two dimensional array frequency coefficient located at n=3 and m=6;

assigning a one dimensional array frequency coefficient located at p=35 a value of said two dimensional array frequency coefficient located at n=3 and m=7;

assigning a one dimensional array frequency coefficient located at p=36 a value of said two dimensional array frequency coefficient located at n=4 and m=3;

assigning a one dimensional array frequency coefficient located at p=37 a value of said two dimensional array frequency coefficient located at n=5 and m=1;

assigning a one dimensional array frequency coefficient located at p=38 a value of said two dimensional array frequency coefficient located at n=6 and m=0;

assigning a one dimensional array frequency coefficient located at p=39 a value of said two dimensional array frequency coefficient located at n=5 and m=2;

assigning a one dimensional array frequency coefficient located at p=40 a value of said two dimensional array frequency coefficient located at n=4 and m=4;

assigning a one dimensional array frequency coefficient located at p=41 a value of

said two dimensional array frequency coefficient located at n=4 and m=5;

assigning a one dimensional array frequency coefficient located at p=42 a value of said two dimensional array frequency coefficient located at n=4 and m=6;

assigning a one dimensional array frequency coefficient located at p=43 a value of said two dimensional array frequency coefficient located at n=4 and m=7;

assigning a one dimensional array frequency coefficient located at p=44 a value of said two dimensional array frequency coefficient located at n=5 and m=3;

assigning a one dimensional array frequency coefficient located at p=45 a value of said two dimensional array frequency coefficient located at n=6 and m=1;

assigning a one dimensional array frequency coefficient located at p=46 a value of said two dimensional array frequency coefficient located at n=6 and m=2;

assigning a one dimensional array frequency coefficient located at p=47 a value of said two dimensional array frequency coefficient located at n=5 and m=4;

assigning a one dimensional array frequency coefficient located at p=48 a value of said two dimensional array frequency coefficient located at n=5 and m=5;

assigning a one dimensional array frequency coefficient located at p=49 a value of said two dimensional array frequency coefficient located at n=5 and m=6;

assigning a one dimensional array frequency coefficient located at p=50 a value of said two dimensional array frequency coefficient located at n=5 and m=7;

assigning a one dimensional array frequency coefficient located at p=51 a value of said two dimensional array frequency coefficient located at n=6 and m=3;

assigning a one dimensional array frequency coefficient located at p=52 a value of said two dimensional array frequency coefficient located at n=7 and m=0;

assigning a one dimensional array frequency coefficient located at p=53 a value of said two dimensional array frequency coefficient located at n=7 and m=1;

assigning a one dimensional array frequency coefficient located at p=54 a value of said two dimensional array frequency coefficient located at n=6 and m=4;

assigning a one dimensional array frequency coefficient located at p=55 a value of said two dimensional array frequency coefficient located at n=6 and m=5;

assigning a one dimensional array frequency coefficient located at p=56 a value of said two dimensional array frequency coefficient located at n=6 and m=6;

assigning a one dimensional array frequency coefficient located at p=57 a value of said two dimensional array frequency coefficient located at n=6 and m=7;

assigning a one dimensional array frequency coefficient located at p=58 a value of said two dimensional array frequency coefficient located at n=7 and m=2;

assigning a one dimensional array frequency coefficient located at p=59 a value of said two dimensional array frequency coefficient located at n=7 and m=3;

assigning a one dimensional array frequency coefficient located at p=60 a value of said two dimensional array frequency coefficient located at n=7 and m=4;

assigning a one dimensional array frequency coefficient located at p=61 a value of said two dimensional array frequency coefficient located at n=7 and m=5;

assigning a one dimensional array frequency coefficient located at p=62 a value of said two dimensional array frequency coefficient located at n=7 and m=6; and

assigning a one dimensional array frequency coefficient located at p=63 a value of said two dimensional array frequency coefficient located at n=7 and m=7.

55. (Previously presented) The method of claim 1, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one dimensional array frequency coefficients, said method further comprises:

representing said sixty-four one dimensional array frequency coefficients with a variable p=0, 1, 2, 3,4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63; and

sequentially scanning said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=63 and producing said two dimensional array of said two dimensional array frequency coefficients.

56. (Previously presented) The method of claim 55, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency

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coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, said step of sequentially scanning said one dimensional array frequency coefficients further comprises:

assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=2;

assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=3;

assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=4;

assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=5;

assigning a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p=6;

assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=7;

assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=8;

assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=9;

assigning a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p=10;

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assigning a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=11;

assigning a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p=12;

assigning a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p=13;

assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=14;

assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=15;

assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=16;

assigning a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p=17;

assigning a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p=18;

assigning a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p=19;

assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=20;

assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

assigning a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p=22;

assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=23;

assigning a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p=24;

assigning a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p=25

assigning a two dimensional array frequency coefficient located at n=2 and m=6 a

value of said one dimensional array frequency coefficient located at p=26;

assigning a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p=27;

assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=28;

assigning a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p=29;

assigning a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p=30;

assigning a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p=31;

assigning a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p=32;

assigning a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p=33;

assigning a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p=34;

assigning a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p=35;

assigning a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p=36;

assigning a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p=37;

assigning a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p=38;

assigning a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p=39;

assigning a two dimensional array frequency coefficient located at n=4 and m=4 a value of said one dimensional array frequency coefficient located at p=40;

assigning a two dimensional array frequency coefficient located at n=4 and m=5 a value of said one dimensional array frequency coefficient located at p=41;

assigning a two dimensional array frequency coefficient located at n=4 and m=6 a value of said one dimensional array frequency coefficient located at p=42;

assigning a two dimensional array frequency coefficient located at n=4 and m=7 a value of said one dimensional array frequency coefficient located at p=43;

assigning a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p=44;

assigning a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p=45;

assigning a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p=46;

assigning a two dimensional array frequency coefficient located at n=5 and m=4 a value of said one dimensional array frequency coefficient located at p=47;

assigning a two dimensional array frequency coefficient located at n=5 and m=5 a value of said one dimensional array frequency coefficient located at p=48;

assigning a two dimensional array frequency coefficient located at n=5 and m=6 a value of said one dimensional array frequency coefficient located at p=49;

assigning a two dimensional array frequency coefficient located at n=5 and m=7 a value of said one dimensional array frequency coefficient located at p=50;

assigning a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p=5l;

assigning a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p=52;

assigning a two dimensional array frequency coefficient located at n=7 and m=l a value of said one dimensional array frequency coefficient located at p=53;

assigning a two dimensional array frequency coefficient located at n=6 and m=4 a value of said one dimensional array frequency coefficient located at p=54;

assigning a two dimensional array frequency coefficient located at n=6 and m=5 a value of said one dimensional array frequency coefficient located at p=55;

assigning a two dimensional array frequency coefficient located at n=6 and m=6 a value of said one dimensional array frequency coefficient located at p=56;

assigning a two dimensional array frequency coefficient located at n=6 and m=7 a

value of said one dimensional array frequency coefficient located at p=57;

assigning a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p=58;

assigning a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p=59;

assigning a two dimensional array frequency coefficient located at n=7 and m=4 a value of said one dimensional array frequency coefficient located at p=60;

assigning a two dimensional array frequency coefficient located at n=7 and m=5 a value of said one dimensional array frequency coefficient located at p=6l;

assigning a two dimensional array frequency coefficient located at n=7 and m=6 a value of said one dimensional array frequency coefficient located at p=62; and

assigning a two dimensional array frequency coefficient located at n=7 and m=7 a value of said one dimensional array frequency coefficient located at p=63.

57. (Previously presented) The device of claim 19, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixteen one dimensional array frequency coefficients, wherein said sixteen one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner, said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=l a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigns a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=3 and m=2; and

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=3.

58. (Previously presented) The device of claim 23, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, wherein said thirty-two one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented

by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises four columns of frequency coefficients and eight rows of frequency coefficients, said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=0 and m=4;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=0 and m=5;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=0 and m=6;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=0 and m=7;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

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assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=2 and m=l;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=1 and m=4;

assigns a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=1 and m=5;

assigns a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=1 and m=6;

assigns a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=1 and m=7;

assigns a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigns a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=2 and m=4;

assigns a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=2 and m=5;

assigns a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=2 and m=6;

assigns a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=2 and m=7;

assigns a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigns a one dimensional array frequency coefficient located at p=28 a value of said

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two dimensional array frequency coefficient located at n=3 and m=4;

assigns a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=3 and m=5;

assigns a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=3 and m=6; and

assigns a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=3 and m=7.

59. (Previously presented) The device of claim 25, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, wherein said thirty-two one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises eight columns of frequency coefficients and four rows of frequency coefficients, said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigns a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigns a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=4 and m=0;

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigns a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigns a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=4 and m=1;

assigns a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=5 and m=0;

assigns a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=4 and m=2;

assigns a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=4 and m=3;

assigns a one dimensional array frequency coefficient located at p=21 a value of said

two dimensional array frequency coefficient located at n=5 and m=l;

assigns a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=6 and m=0;

assigns a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=5 and m=2;

assigns a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=5 and m=3;

assigns a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=6 and m=1;

assigns a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=7 and m=0;

assigns a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=6 and m=2;

assigns a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=6 and m=3;

assigns a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=7 and m=1;

assigns a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=7 and m=2; and

assigns a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=7 and m=3.

60. (Previously presented) The device of claim 27, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one dimensional array frequency coefficients, wherein said sixty-four one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63, wherein in scanning said two dimensional array frequency

coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises eight columns of frequency coefficients and eight rows of frequency coefficients, said encoder further:

assigns a one dimensional array frequency coefficient located at $p=0$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=0$;

assigns a one dimensional array frequency coefficient located at $p=1$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=1$;

assigns a one dimensional array frequency coefficient located at $p=2$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=2$;

assigns a one dimensional array frequency coefficient located at $p=3$ a value of said two dimensional array frequency coefficient located at $n=1$ and $m=0$;

assigns a one dimensional array frequency coefficient located at $p=4$ a value of said two dimensional array frequency coefficient located at $n=1$ and $m=1$;

assigns a one dimensional array frequency coefficient located at $p=5$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=3$;

assigns a one dimensional array frequency coefficient located at $p=6$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=4$;

assigns a one dimensional array frequency coefficient located at $p=7$ a value of said two dimensional array frequency coefficient located at $n=1$ and $m=2$;

assigns a one dimensional array frequency coefficient located at $p=8$ a value of said two dimensional array frequency coefficient located at $n=2$ and $m=0$;

assigns a one dimensional array frequency coefficient located at $p=9$ a value of said two dimensional array frequency coefficient located at $n=1$ and $m=3$;

assigns a one dimensional array frequency coefficient located at $p=10$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=5$;

assigns a one dimensional array frequency coefficient located at $p=11$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=6$;

assigns a one dimensional array frequency coefficient located at $p=12$ a value of said two dimensional array frequency coefficient located at $n=0$ and $m=7$;

assigns a one dimensional array frequency coefficient located at $p=13$ a value of said two dimensional array frequency coefficient located at $n=1$ and $m=4$;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=2 and m=l;

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=1 and m=5;

assigns a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=1 and m=6;

assigns a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=1 and m=7;

assigns a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=2l a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=4 and m=0;

assigns a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigns a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=2 and m=4;

assigns a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=2 and m=5;

assigns a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=2 and m=6;

assigns a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=2 and m=7;

assigns a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigns a one dimensional array frequency coefficient located at p=29 a value of said

two dimensional array frequency coefficient located at n=4 and m=1;

assigns a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=5 and m=0;

assigns a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=4 and m=2;

assigns a one dimensional array frequency coefficient located at p=32 a value of said two dimensional array frequency coefficient located at n=3 and m=4;

assigns a one dimensional array frequency coefficient located at p=33 a value of said two dimensional array frequency coefficient located at n=3 and m=5;

assigns a one dimensional array frequency coefficient located at p=34 a value of said two dimensional array frequency coefficient located at n=3 and m=6;

assigns a one dimensional array frequency coefficient located at p=35 a value of said two dimensional array frequency coefficient located at n=3 and m=7;

assigns a one dimensional array frequency coefficient located at p=36 a value of said two dimensional array frequency coefficient located at n=4 and m=3;

assigns a one dimensional array frequency coefficient located at p=37 a value of said two dimensional array frequency coefficient located at n=5 and m=1;

assigns a one dimensional array frequency coefficient located at p=38 a value of said two dimensional array frequency coefficient located at n=6 and m=0;

assigns a one dimensional array frequency coefficient located at p=39 a value of said two dimensional array frequency coefficient located at n=5 and m=2;

assigns a one dimensional array frequency coefficient located at p=40 a value of said two dimensional array frequency coefficient located at n=4 and m=4;

assigns a one dimensional array frequency coefficient located at p=41 a value of said two dimensional array frequency coefficient located at n=4 and m=5;

assigns a one dimensional array frequency coefficient located at p=42 a value of said two dimensional array frequency coefficient located at n=4 and m=6;

assigns a one dimensional array frequency coefficient located at p=43 a value of said two dimensional array frequency coefficient located at n=4 and m=7;

assigns a one dimensional array frequency coefficient located at p=44 a value of said two dimensional array frequency coefficient located at n=5 and m=3;

assigns a one dimensional array frequency coefficient located at p=45 a value of said two dimensional array frequency coefficient located at n=6 and m=1;

assigns a one dimensional array frequency coefficient located at p=46 a value of said two dimensional array frequency coefficient located at n=6 and m=2;

assigns a one dimensional array frequency coefficient located at p=47 a value of said two dimensional array frequency coefficient located at n=5 and m=4;

assigns a one dimensional array frequency coefficient located at p=48 a value of said two dimensional array frequency coefficient located at n=5 and m=5;

assigns a one dimensional array frequency coefficient located at p=49 a value of said two dimensional array frequency coefficient located at n=5 and m=6;

assigns a one dimensional array frequency coefficient located at p=50 a value of said two dimensional array frequency coefficient located at n=5 and m=7;

assigns a one dimensional array frequency coefficient located at p=51 a value of said two dimensional array frequency coefficient located at n=6 and m=3;

assigns a one dimensional array frequency coefficient located at p=52 a value of said two dimensional array frequency coefficient located at n=7 and m=0;

assigns a one dimensional array frequency coefficient located at p=53 a value of said two dimensional array frequency coefficient located at n=7 and m=1;

assigns a one dimensional array frequency coefficient located at p=54 a value of said two dimensional array frequency coefficient located at n=6 and m=4;

assigns a one dimensional array frequency coefficient located at p=55 a value of said two dimensional array frequency coefficient located at n=6 and m=5;

assigns a one dimensional array frequency coefficient located at p=56 a value of said two dimensional array frequency coefficient located at n=6 and m=6;

assigns a one dimensional array frequency coefficient located at p=57 a value of said two dimensional array frequency coefficient located at n=6 and m=7;

assigns a one dimensional array frequency coefficient located at p=58 a value of said two dimensional array frequency coefficient located at n=7 and m=2;

assigns a one dimensional array frequency coefficient located at p=59 a value of said two dimensional array frequency coefficient located at n=7 and m=3;

assigns a one dimensional array frequency coefficient located at p=60 a value of said

two dimensional array frequency coefficient located at n=7 and m=4;

assigns a one dimensional array frequency coefficient located at p=61 a value of said two dimensional array frequency coefficient located at n=7 and m=5;

assigns a one dimensional array frequency coefficient located at p=62 a value of said two dimensional array frequency coefficient located at n=7 and m=6; and

assigns a one dimensional array frequency coefficient located at p=63 a value of said two dimensional array frequency coefficient located at n=7 and m=7.

61. (Previously Presented) A system for encoding digital video content and decoding encoded digital video content, said digital video content and said encoded digital video content comprising a stream of pictures, slices, or macroblocks, which are at least one of intra, predicted or bi-predicted pictures, slices, or macroblocks, in the form of blocks of pixels, said system comprising:

an encoder configured to perform transform-based encoding of said digital video content, wherein said encoder scans said form of blocks of pixels forming a two dimensional array of two dimensional array frequency coefficients in a manner that is vertically biased, said encoder producing a one dimensional array of one dimensional array frequency coefficients including high-energy low frequency coefficients and low-energy high frequency coefficients, wherein the high-energy low frequency coefficients are scanned before the low-energy high frequency coefficients; and

a decoder for transform-based decoding of said encoded digital video content, wherein said decoder receives said one dimensional array of one dimensional array frequency coefficients, scanned by said encoder, and scans said one dimensional array frequency coefficients in numerical sequential order thereby producing said two dimensional array of said two dimensional array frequency coefficients, wherein when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, said system:

represents said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column;

represents said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least

one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row; and

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said scanning order starting at 0 and ending at 15 and producing said one dimensional array of said one dimensional array frequency coefficients, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner, said encoder:

assigns a scanning order = 0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigns a scanning order = 1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigns a scanning order = 2 for a two dimensional array frequency coefficient located at n=l and m=0;

assigns a scanning order = 3 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigns a scanning order = 4 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order = 5 for a two dimensional array frequency coefficient located at n=l and m=1;

assigns a scanning order = 6 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigns a scanning order = 7 for a two dimensional array frequency coefficient located at n=l and m=3;

assigns a scanning order = 8 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order = 9 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order = 10 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order = 11 for a two dimensional array frequency

coefficient located at n=2 and m=3;

assigns a scanning order = 12 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order = 13 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order = 14 for a two dimensional array frequency coefficient located at n=3 and m=2; and

assigns a scanning order = 15 for a two dimensional array frequency coefficient located at n=3 and m=3.

62-63. (Canceled).

64. (Previously presented) The system of claim 60, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixteen one dimensional array frequency coefficients, wherein said sixteen one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m= 1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigns a one dimensional array frequency coefficient located at p=5 a value of said

two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=3 and m=2; and

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=3.

65. (Previously presented) The system of claim 61, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixteen one dimensional array frequency coefficients, said system:

represents said sixteen one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15; and

wherein said decoder sequentially scans said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential

scanning starting at p=0 and ending at p=15 and producing said two dimensional array of said two dimensional array frequency coefficients.

66. (Previously presented) The system of claim 65, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients, said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=2;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=3;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=4;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=6;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=7;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=8;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value

of said one dimensional array frequency coefficient located at p=9;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=10;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=11;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=12

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=14; and

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=15.

67. (Previously presented) The system of claim 61, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, said system:

represents said columns with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column;

represents said rows with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row; and

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31 and producing said one dimensional array of said one dimensional array frequency coefficients.

68. (Previously presented) The system of claim 67, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said

two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, said encoder:

assigns a scanning order = 0 for a two dimensional array frequency coefficient located in at n=0 and m=0;

assigns a scanning order = 1 for a two dimensional array frequency coefficient located in at n=0 and m=1;

assigns a scanning order = 2 for a two dimensional array frequency coefficient located in at n=0 and m=2;

assigns a scanning order = 3 for a two dimensional array frequency coefficient located in at n=0 and m=3;

assigns a scanning order = 4 for a two dimensional array frequency coefficient located in at n=1 and m=0;

assigns a scanning order = 5 for a two dimensional array frequency coefficient located in at n=1 and m=1;

assigns a scanning order = 6 for a two dimensional array frequency coefficient located in at n=1 and m=2;

assigns a scanning order = 7 for a two dimensional array frequency coefficient located in at n=0 and m=4;

assigns a scanning order = 8 for a two dimensional array frequency coefficient located in at n=0 and m=5;

assigns a scanning order = 9 for a two dimensional array frequency coefficient located in at n=0 and m=6;

assigns a scanning order = 10 for a two dimensional array frequency coefficient located in at n=0 and m=7;

assigns a scanning order = 11 for a two dimensional array frequency coefficient located in at n=1 and m=3;

assigns a scanning order = 12 for a two dimensional array frequency coefficient located in at n=2 and m=0;

assigns a scanning order = 13 for a two dimensional array frequency coefficient located in at n=2 and m= 1;

assigns a scanning order = 14 for a two dimensional array frequency coefficient

located in at n=2 and m=2;

assigns a scanning order = 15 for a two dimensional array frequency coefficient located in at n=1 and m=4;

assigns a scanning order = 16 for a two dimensional array frequency coefficient located in at n=1 and m=5;

assigns a scanning order = 17 for a two dimensional array frequency coefficient located in at n=1 and m=6;

assigns a scanning order = 18 for a two dimensional array frequency coefficient located in at n=1 and m=7;

assigns a scanning order = 19 for a two dimensional array frequency coefficient located in at n=2 and m=3;

assigns a scanning order = 20 for a two dimensional array frequency coefficient located in at n=3 and m=0;

assigns a scanning order = 21 for a two dimensional array frequency coefficient located in at n=3 and m=1;

assigns a scanning order = 22 for a two dimensional array frequency coefficient located in at n=3 and m=2;

assigns a scanning order = 23 for a two dimensional array frequency coefficient located in at n=2 and m=4;

assigns a scanning order = 24 for a two dimensional array frequency coefficient located in at n=2 and m=5;

assigns a scanning order = 25 for a two dimensional array frequency coefficient located in at n=2 and m=6;

assigns a scanning order = 26 for a two dimensional array frequency coefficient located in at n=2 and m=7;

assigns a scanning order = 27 for a two dimensional array frequency coefficient located in at n=3 and m=3;

assigns a scanning order = 28 for a two dimensional array frequency coefficient located in at n=3 and m=4;

assigns a scanning order = 29 for a two dimensional array frequency coefficient located in at n=3 and m=5;

assigns a scanning order = 30 for a two dimensional array frequency coefficient located in at n=3 and m=6; and

assigns a scanning order = 31 for a two dimensional array frequency coefficient located in at n=3 and m=7.

69. (Previously presented) The system of claim 68, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, wherein said thirty-two one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=7 a value of said

two dimensional array frequency coefficient located at n=0 and m=4;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=0 and m=5;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=0 and m=6;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=0 and m=7;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=1 and m=4;

assigns a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=1 and m=5;

assigns a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=1 and m=6;

assigns a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=1 and m=7;

assigns a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigns a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=2 and m=4;

assigns a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=2 and m=5;

assigns a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=2 and m=6;

assigns a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=2 and m=7;

assigns a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigns a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=3 and m=4;

assigns a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=3 and m=5;

assigns a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=3 and m=6;

and assigns a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=3 and m=7.

70. (Previously presented) The system of claim 61, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, said system:

represents said thirty-two one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31; and

wherein said decoder sequentially scans said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=31 and producing said two dimensional array of said two dimensional array frequency coefficients.

71. (Previously presented) The system of claim 70, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients, said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=2;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=3;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=4;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=6;

assigns a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p=7;

assigns a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p=8;

assigns a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=9;

assigns a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p=10;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=11;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=12;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=14;

assigns a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p=15;

assigns a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p=16;

assigns a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p=17;

assigns a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p=18;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=19;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=20;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=22;

assigns a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p=23;

assigns a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p=24;

assigns a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p=25;

assigns a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p=26;

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=27;

assigns a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p=28;

assigns a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p=29;

assigns a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p=30;

and assigns a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p=31.

72. (Previously presented) The system of claim 61, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, said system:

represents said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column;

represents said rows with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row; and

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 31 and producing said one dimensional array of said one dimensional array frequency coefficients.

73 (Previously presented) The system of claim 72, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, said encoder:

assigns a scanning order=0 for a two dimensional array frequency coefficient located at n=0 and m=0;

assigns a scanning order=1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigns a scanning order=2 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigns a scanning order=3 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigns a scanning order=4 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order=5 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigns a scanning order=6 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order=7 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigns a scanning order=8 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigns a scanning order=9 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order=10 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order=11 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order=12 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigns a scanning order=13 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order=14 for a two dimensional array frequency coefficient located at n=4 and m=0;

assigns a scanning order=15 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigns a scanning order=16 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigns a scanning order=17 for a two dimensional array frequency coefficient located at n=4 and m=1;

assigns a scanning order=18 for a two dimensional array frequency coefficient located at n=5 and m=0;

assigns a scanning order=19 for a two dimensional array frequency coefficient located at n=4 and m=2;

assigns a scanning order=20 for a two dimensional array frequency coefficient located at n=4 and m=3;

assigns a scanning order=21 for a two dimensional array frequency coefficient located at n=5 and m=1;

assigns a scanning order=22 for a two dimensional array frequency coefficient located at n=6 and m=0;

assigns a scanning order=23 for a two dimensional array frequency coefficient located at n=5 and m=2;

assigns a scanning order=24 for a two dimensional array frequency coefficient located at n=5 and m=3;

assigns a scanning order=25 for a two dimensional array frequency coefficient located at n=6 and m=1;

assigns a scanning order=26 for a two dimensional array frequency coefficient located at n=7 and m=0;

assigns a scanning order=27 for a two dimensional array frequency coefficient located at n=6 and m=2;

assigns a scanning order=28 for a two dimensional array frequency coefficient located at n=6 and m=3;

assigns a scanning order=29 for a two dimensional array frequency coefficient located at n=7 and m=1;

assigns a scanning order=30 for a two dimensional array frequency coefficient located at n=7 and m=2; and

assigns a scanning order=31 for a two dimensional array frequency coefficient located at n=7 and m=3 if said scanning order=31.

74. (Previously presented) The system of claim 73, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, wherein said thirty-two one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31, wherein in scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

assigns a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigns a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=4 and m=0;

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigns a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigns a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=4 and m=1;

assigns a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=5 and m=0;

assigns a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=4 and m=2;

assigns a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=4 and m=3;

assigns a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=5 and m=1;

assigns a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=6 and m=0;

assigns a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=5 and m=2;

assigns a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=5 and m=3;

assigns a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=6 and m=1;

assigns a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=7 and m=0;

assigns a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=6 and m=2;

assigns a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=6 and m=3;

assigns a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=7 and m=1;

assigns a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=7 and m=2; and

assigns a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=7 and m=3.

75. (Previously presented) The system of claim 70, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or

rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=2;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=3;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=4;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=6;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=7;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=8;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=9;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=10;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=11;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=12;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

assigns a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p=14;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=15;

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=16;

assigns a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p=17;

assigns a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p=18;

assigns a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p=19;

assigns a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p=20;

assigns a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

assigns a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p=22;

assigns a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p=23;

assigns a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p=24;

assigns a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p=25;

assigns a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p=26;

assigns a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p=27;

assigns a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p=28;

assigns a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p=29;

assigns a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p=30; and

assigns a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p=31.

76. (Previously presented) The system of claim 61, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, said system:

represents said columns with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column;

represents said rows with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row; and

wherein said encoder sequentially scans said two dimensional array of said two dimensional array frequency coefficients in a sequential scanning order that is vertically biased, said sequential scanning order starting at 0 and ending at 63 and producing said one dimensional array of said one dimensional array frequency coefficients.

77. (Previously presented) The system of claim 76, wherein in sequentially scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, said encoder:

assigns a scanning order=0 for a two dimensional array frequency coefficient located at n=0 and m=0;

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assigns a scanning order=1 for a two dimensional array frequency coefficient located at n=0 and m=1;

assigns a scanning order=2 for a two dimensional array frequency coefficient located at n=0 and m=2;

assigns a scanning order=3 for a two dimensional array frequency coefficient located at n=1 and m=0;

assigns a scanning order=4 for a two dimensional array frequency coefficient located at n=1 and m=1;

assigns a scanning order=5 for a two dimensional array frequency coefficient located at n=0 and m=3;

assigns a scanning order=6 for a two dimensional array frequency coefficient located at n=0 and m=4;

assigns a scanning order=7 for a two dimensional array frequency coefficient located at n=1 and m=2;

assigns a scanning order=8 for a two dimensional array frequency coefficient located at n=2 and m=0;

assigns a scanning order=9 for a two dimensional array frequency coefficient located at n=1 and m=3;

assigns a scanning order=10 for a two dimensional array frequency coefficient located at n=0 and m=5;

assigns a scanning order=11 for a two dimensional array frequency coefficient located at n=0 and m=6;

assigns a scanning order=12 for a two dimensional array frequency coefficient located at n=0 and m=7;

assigns a scanning order=13 for a two dimensional array frequency coefficient located at n=1 and m=4;

assigns a scanning order=14 for a two dimensional array frequency coefficient located at n=2 and m=1;

assigns a scanning order=15 for a two dimensional array frequency coefficient located at n=3 and m=0;

assigns a scanning order=16 for a two dimensional array frequency coefficient located at n=2 and m=2;

assigns a scanning order=17 for a two dimensional array frequency coefficient located at n=1 and m=5;

assigns a scanning order=18 for a two dimensional array frequency coefficient located at n=1 and m=6;

assigns a scanning order=19 for a two dimensional array frequency coefficient located at n=1 and m=7;

assigns a scanning order=20 for a two dimensional array frequency coefficient located at n=2 and m=3;

assigns a scanning order=21 for a two dimensional array frequency coefficient located at n=3 and m=1;

assigns a scanning order=22 for a two dimensional array frequency coefficient located at n=4 and m=0;

assigns a scanning order=23 for a two dimensional array frequency coefficient located at n=3 and m=2;

assigns a scanning order=24 for a two dimensional array frequency coefficient located at n=2 and m=4;

assigns a scanning order=25 for a two dimensional array frequency coefficient located at n=2 and m=5;

assigns a scanning order=26 for a two dimensional array frequency coefficient located at n=2 and m=6;

assigns a scanning order=27 for a two dimensional array frequency coefficient located at n=2 and m=7;

assigns a scanning order=28 for a two dimensional array frequency coefficient located at n=3 and m=3;

assigns a scanning order=29 for a two dimensional array frequency coefficient located at n=4 and m=1;

assigns a scanning order=30 for a two dimensional array frequency coefficient located at n=5 and m=0;

assigns a scanning order=31 for a two dimensional array frequency coefficient located at n=4 and m=2;

assigns a scanning order=32 for a two dimensional array frequency coefficient located at n=3 and m=4;

assigns a scanning order=33 for a two dimensional array frequency coefficient located at n=3 and m=5;

assigns a scanning order=34 for a two dimensional array frequency coefficient located at n=3 and m=6;

assigns a scanning order=35 for a two dimensional array frequency coefficient located at n=3 and m=7;

assigns a scanning order=36 for a two dimensional array frequency coefficient located at n=4 and m=3;

assigns a scanning order=37 for a two dimensional array frequency coefficient located at n=5 and m=1;

assigns a scanning order=38 for a two dimensional array frequency coefficient located at n=6 and m=0;

assigns a scanning order=39 for a two dimensional array frequency coefficient located at n=5 and m=2;

assigns a scanning order=40 for a two dimensional array frequency coefficient located at n=4 and m=4;

assigns a scanning order=41 for a two dimensional array frequency coefficient located at n=4 and m=5;

assigns a scanning order=42 for a two dimensional array frequency coefficient located at n=4 and m=6;

assigns a scanning order=43 for a two dimensional array frequency coefficient located at n=4 and m=7;

assigns a scanning order=44 for a two dimensional array frequency coefficient located at n=5 and m=3;

assigns a scanning order=45 for a two dimensional array frequency coefficient located at n=6 and m=1;

assigns a scanning order=46 for a two dimensional array frequency coefficient located at n=6 and m=2;

assigns a scanning order=47 for a two dimensional array frequency coefficient located at n=5 and m=4;

assigns a scanning order=48 for a two dimensional array frequency coefficient located at n=5 and m=5;

assigns a scanning order=49 for a two dimensional array frequency coefficient located at n=5 and m=6;

assigns a scanning order=50 for a two dimensional array frequency coefficient located at n=5 and m=7;

assigns a scanning order=51 for a two dimensional array frequency coefficient located at n=6 and m=3;

assigns a scanning order=52 for a two dimensional array frequency coefficient located at n=7 and m=0;

assigns a scanning order=53 for a two dimensional array frequency coefficient located at n=7 and m=1;

assigns a scanning order=54 for a two dimensional array frequency coefficient located at n=6 and m=4;

assigns a scanning order=55 for a two dimensional array frequency coefficient located at n=6 and m=5;

assigns a scanning order=56 for a two dimensional array frequency coefficient located at n=6 and m=6;

assigns a scanning order=57 for a two dimensional array frequency coefficient located at n=6 and m=7;

assigns a scanning order=58 for a two dimensional array frequency coefficient located at n=7 and m=2;

assigns a scanning order=59 for a two dimensional array frequency coefficient located at n=7 and m=3;

assigns a scanning order=60 for a two dimensional array frequency coefficient located at n=7 and m=4;

assigns a scanning order=61 for a two dimensional array frequency coefficient located at n=7 and m=5;

assigns a scanning order=62 for a two dimensional array frequency coefficient located at n=7 and m=6; and

assigns a scanning order=63 for a two dimensional array frequency coefficient located at n=7 and m=7.

78. (Previously presented) The system of claim 77, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one dimensional array frequency coefficients, wherein said sixty-four one dimensional array frequency coefficients are represented with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63, wherein in scanning said two dimensional array frequency coefficients in a vertically biased manner when said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, said encoder further:

assigns a one dimensional array frequency coefficient located at p=0 a value of said two dimensional array frequency coefficient located at n=0 and m=0;

assigns a one dimensional array frequency coefficient located at p=1 a value of said two dimensional array frequency coefficient located at n=0 and m=1;

assigns a one dimensional array frequency coefficient located at p=2 a value of said two dimensional array frequency coefficient located at n=0 and m=2;

assigns a one dimensional array frequency coefficient located at p=3 a value of said two dimensional array frequency coefficient located at n=1 and m=0;

assigns a one dimensional array frequency coefficient located at p=4 a value of said two dimensional array frequency coefficient located at n=1 and m=1;

assigns a one dimensional array frequency coefficient located at p=5 a value of said two dimensional array frequency coefficient located at n=0 and m=3;

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assigns a one dimensional array frequency coefficient located at p=6 a value of said two dimensional array frequency coefficient located at n=0 and m=4;

assigns a one dimensional array frequency coefficient located at p=7 a value of said two dimensional array frequency coefficient located at n=1 and m=2;

assigns a one dimensional array frequency coefficient located at p=8 a value of said two dimensional array frequency coefficient located at n=2 and m=0;

assigns a one dimensional array frequency coefficient located at p=9 a value of said two dimensional array frequency coefficient located at n=1 and m=3;

assigns a one dimensional array frequency coefficient located at p=10 a value of said two dimensional array frequency coefficient located at n=0 and m=5;

assigns a one dimensional array frequency coefficient located at p=11 a value of said two dimensional array frequency coefficient located at n=0 and m=6;

assigns a one dimensional array frequency coefficient located at p=12 a value of said two dimensional array frequency coefficient located at n=0 and m=7;

assigns a one dimensional array frequency coefficient located at p=13 a value of said two dimensional array frequency coefficient located at n=1 and m=4;

assigns a one dimensional array frequency coefficient located at p=14 a value of said two dimensional array frequency coefficient located at n=2 and m=1;

assigns a one dimensional array frequency coefficient located at p=15 a value of said two dimensional array frequency coefficient located at n=3 and m=0;

assigns a one dimensional array frequency coefficient located at p=16 a value of said two dimensional array frequency coefficient located at n=2 and m=2;

assigns a one dimensional array frequency coefficient located at p=17 a value of said two dimensional array frequency coefficient located at n=1 and m=5;

assigns a one dimensional array frequency coefficient located at p=18 a value of said two dimensional array frequency coefficient located at n=1 and m=6;

assigns a one dimensional array frequency coefficient located at p=19 a value of said two dimensional array frequency coefficient located at n=1 and m=7;

assigns a one dimensional array frequency coefficient located at p=20 a value of said two dimensional array frequency coefficient located at n=2 and m=3;

assigns a one dimensional array frequency coefficient located at p=21 a value of said two dimensional array frequency coefficient located at n=3 and m=1;

assigns a one dimensional array frequency coefficient located at p=22 a value of said two dimensional array frequency coefficient located at n=4 and m=0;

assigns a one dimensional array frequency coefficient located at p=23 a value of said two dimensional array frequency coefficient located at n=3 and m=2;

assigns a one dimensional array frequency coefficient located at p=24 a value of said two dimensional array frequency coefficient located at n=2 and m=4;

assigns a one dimensional array frequency coefficient located at p=25 a value of said two dimensional array frequency coefficient located at n=2 and m=5;

assigns a one dimensional array frequency coefficient located at p=26 a value of said two dimensional array frequency coefficient located at n=2 and m=6;

assigns a one dimensional array frequency coefficient located at p=27 a value of said two dimensional array frequency coefficient located at n=2 and m=7;

assigns a one dimensional array frequency coefficient located at p=28 a value of said two dimensional array frequency coefficient located at n=3 and m=3;

assigns a one dimensional array frequency coefficient located at p=29 a value of said two dimensional array frequency coefficient located at n=4 and m=1;

assigns a one dimensional array frequency coefficient located at p=30 a value of said two dimensional array frequency coefficient located at n=5 and m=0;

assigns a one dimensional array frequency coefficient located at p=31 a value of said two dimensional array frequency coefficient located at n=4 and m=2;

assigns a one dimensional array frequency coefficient located at p=32 a value of said two dimensional array frequency coefficient located at n=3 and m=4;

assigns a one dimensional array frequency coefficient located at p=33 a value of said two dimensional array frequency coefficient located at n=3 and m=5;

assigns a one dimensional array frequency coefficient located at p=34 a value of said two dimensional array frequency coefficient located at n=3 and m=6;

assigns a one dimensional array frequency coefficient located at p=35 a value of said two dimensional array frequency coefficient located at n=3 and m=7;

assigns a one dimensional array frequency coefficient located at p=36 a value of said two dimensional array frequency coefficient located at n=4 and m=3;

assigns a one dimensional array frequency coefficient located at p=37 a value of said two dimensional array frequency coefficient located at n=5 and m=1;

assigns a one dimensional array frequency coefficient located at p=38 a value of said two dimensional array frequency coefficient located at n=6 and m=0;

assigns a one dimensional array frequency coefficient located at p=39 a value of said two dimensional array frequency coefficient located at n=5 and m=2;

assigns a one dimensional array frequency coefficient located at p=40 a value of said two dimensional array frequency coefficient located at n=4 and m=4;

assigns a one dimensional array frequency coefficient located at p=41 a value of said two dimensional array frequency coefficient located at n=4 and m=5;

assigns a one dimensional array frequency coefficient located at p=42 a value of said two dimensional array frequency coefficient located at n=4 and m=6;

assigns a one dimensional array frequency coefficient located at p=43 a value of said two dimensional array frequency coefficient located at n=4 and m=7;

assigns a one dimensional array frequency coefficient located at p=44 a value of said two dimensional array frequency coefficient located at n=5 and m=3;

assigns a one dimensional array frequency coefficient located at p=45 a value of said two dimensional array frequency coefficient located at n=6 and m=1;

assigns a one dimensional array frequency coefficient located at p=46 a value of said two dimensional array frequency coefficient located at n=6 and m=2;

assigns a one dimensional array frequency coefficient located at p=47 a value of said two dimensional array frequency coefficient located at n=5 and m=4;

assigns a one dimensional array frequency coefficient located at p=48 a value of said two dimensional array frequency coefficient located at n=5 and m=5;

assigns a one dimensional array frequency coefficient located at p=49 a value of said two dimensional array frequency coefficient located at n=5 and m=6;

assigns a one dimensional array frequency coefficient located at p=50 a value of said two dimensional array frequency coefficient located at n=5 and m=7;

assigns a one dimensional array frequency coefficient located at p=51 a value of said two dimensional array frequency coefficient located at n=6 and m=3;

assigns a one dimensional array frequency coefficient located at p=52 a value of said two dimensional array frequency coefficient located at n=7 and m=0;

assigns a one dimensional array frequency coefficient located at p=53 a value of said two dimensional array frequency coefficient located at n=7 and m=1;

assigns a one dimensional array frequency coefficient located at p=54 a value of said two dimensional array frequency coefficient located at n=6 and m=4;

assigns a one dimensional array frequency coefficient located at p=55 a value of said two dimensional array frequency coefficient located at n=6 and m=5;

assigns a one dimensional array frequency coefficient located at p=56 a value of said two dimensional array frequency coefficient located at n=6 and m=6;

assigns a one dimensional array frequency coefficient located at p=57 a value of said two dimensional array frequency coefficient located at n=6 and m=7;

assigns a one dimensional array frequency coefficient located at p=58 a value of said two dimensional array frequency coefficient located at n=7 and m=2;

assigns a one dimensional array frequency coefficient located at p=59 a value of said two dimensional array frequency coefficient located at n=7 and m=3;

assigns a one dimensional array frequency coefficient located at p=60 a value of said two dimensional array frequency coefficient located at n=7 and m=4;

assigns a one dimensional array frequency coefficient located at p=61 a value of said two dimensional array frequency coefficient located at n=7 and m=5;

assigns a one dimensional array frequency coefficient located at p=62 a value of said two dimensional array frequency coefficient located at n=7 and m=6; and

assigns a one dimensional array frequency coefficient located at p=63 a value of said two dimensional array frequency coefficient located at n=7 and m=7.

79. (Previously presented) The system of claim 61, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one dimensional array frequency coefficients, said system:

represents said sixty-four one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order,

wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63; wherein said decoder sequentially scans said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=63 and producing said two dimensional array of said two dimensional array frequency coefficients.

80. (Previously presented) The system of claim 79, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, wherein in sequentially scanning said one dimensional array frequency coefficients said decoder:

assigns a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

assigns a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

assigns a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=2;

assigns a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=3;

assigns a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=4;

assigns a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=5;

assigns a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p=6;

assigns a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=7;

assigns a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=8;

assigns a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=9;

assigns a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p=10;

assigns a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=11;

assigns a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p=12;

assigns a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p=13;

assigns a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=14;

assigns a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=15;

assigns a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=16;

assigns a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p=17;

assigns a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p=18;

assigns a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p=19;

assigns a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=20;

assigns a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

assigns a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p=22;

assigns a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=23;

assigns a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p=24;

assigns a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p=25;

assigns a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p=26;

assigns a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p=27;

assigns a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=28;

assigns a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p=29;

assigns a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p=30;

assigns a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p=31;

assigns a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p=32;

assigns a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p=33;

assigns a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p=34;

assigns a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p=35;

assigns a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p=36;

assigns a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p=37;

assigns a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p=38;

assigns a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p=39;

assigns a two dimensional array frequency coefficient located at n=4 and m=4 a value of said one dimensional array frequency coefficient located at p=40;

assigns a two dimensional array frequency coefficient located at n=4 and m=5 a value of said one dimensional array frequency coefficient located at p=41;

assigns a two dimensional array frequency coefficient located at n=4 and m=6 a value of said one dimensional array frequency coefficient located at p=42;

assigns a two dimensional array frequency coefficient located at n=4 and m=7 a value of said one dimensional array frequency coefficient located at p=43;

assigns a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p=44;

assigns a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p=45;

assigns a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p=46;

assigns a two dimensional array frequency coefficient located at n=5 and m=4 a value of said one dimensional array frequency coefficient located at p=47;

assigns a two dimensional array frequency coefficient located at n=5 and m=5 a value of said one dimensional array frequency coefficient located at p=48;

assigns a two dimensional array frequency coefficient located at n=5 and m=6 a value of said one dimensional array frequency coefficient located at p=49;

assigns a two dimensional array frequency coefficient located at n=5 and m=7 a value of said one dimensional array frequency coefficient located at p=50;

assigns a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p=51;

assigns a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p=52;

assigns a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p=53;

assigns a two dimensional array frequency coefficient located at n=6 and m=4 a value of said one dimensional array frequency coefficient located at p=54;

assigns a two dimensional array frequency coefficient located at n=6 and m=5 a value of said one dimensional array frequency coefficient located at p=55;

assigns a two dimensional array frequency coefficient located at n=6 and m=6 a value of said one dimensional array frequency coefficient located at p=56;

assigns a two dimensional array frequency coefficient located at n=6 and m=7 a value of said one dimensional array frequency coefficient located at p=57;

assigns a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p=58;

assigns a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p=59;

assigns a two dimensional array frequency coefficient located at n=7 and m=4 a value of said one dimensional array frequency coefficient located at p=60;

assigns a two dimensional array frequency coefficient located at n=7 and m=5 a value of said one dimensional array frequency coefficient located at p=61;

assigns a two dimensional array frequency coefficient located at n=7 and m=6 a value of said one dimensional array frequency coefficient located at p=62; and

assigns a two dimensional array frequency coefficient located at n=7 and m=7 a value of said one dimensional array frequency coefficient located at p=63.

81-109. (Canceled).

110. (Previously presented) The system of claim 37, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixteen one dimensional array frequency coefficients, said system further comprises:

means for representing said sixteen one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixteenth one dimensional array frequency coefficient is represented by p=15; and

means for sequentially scanning said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=15 and producing said two dimensional array of said two dimensional array frequency coefficients.

111. (Previously presented) The system of claim 110, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is at least one of a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, said means for sequentially scanning said one dimensional array frequency coefficients further comprises:

means for assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=2;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=3;

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means for assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=4;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=6;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=7;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=8;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=9;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=10;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=11;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=12;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=14; and

means for assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=15.

112. (Previously presented) The system of claim 37, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises thirty-two one dimensional array frequency coefficients, said system further comprises:

means for representing said thirty-two one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, in a numerical sequential order, wherein a first one

dimensional array frequency coefficient is represented by p=0 and a thirty-second one dimensional array frequency coefficient is represented by p=31; and

means for sequentially scanning said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequential scanning starting at p=0 and ending at p=31 and producing said two dimensional array of said two dimensional array frequency coefficients.

113. (Previously presented) The system of claim 112, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 4 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, or 3, wherein n=0 is at least a first or leftmost column, n=1 is a second column, n=2 is a third column, and n=3 is a fourth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, said means for sequentially scanning said one dimensional array frequency coefficients further comprises:

means for assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=2;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=3;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=4;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=6;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p=7;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p=8;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=9;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p=10;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=11;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=12;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=14;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p=15;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p=16;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p=17;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p=18;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=19;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=20;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=22;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p=23;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p=24;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p=25;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p=26;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=27;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p=28;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p=29;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p=30; and

means for assigning a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p=31.

114. (Previously presented) The system of claim 112, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 4 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, or 3, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, and m=3 is at least one of a fourth or bottom row, said means for sequentially scanning said one dimensional array frequency coefficients further comprises:

means for assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=2;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=3;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=4;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=5;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=6;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=7;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=8;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=9;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=10;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=11;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=12;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=13;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p=14;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=15;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=16;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p=17;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p=18;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p=19;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p=20;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p=22;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p=23;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p=24;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p=25;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p=26;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p=27;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p=28;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p=29;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p=30; and

means for assigning a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p=31.

115. (Previously presented) The system of claim 37, wherein if said one dimensional array of said one dimensional array frequency coefficients comprises sixty-four one dimensional array frequency coefficients, said system further comprises:

means for representing said sixty-four one dimensional array frequency coefficients with a variable p=0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, in a numerical sequential order, wherein a first one dimensional array frequency coefficient is represented by p=0 and a sixty-fourth one dimensional array frequency coefficient is represented by p=63; and

means for sequentially scanning said one dimensional array of said one dimensional array frequency coefficients in said numerical sequential order, said sequentially scanning starting at p=0 and ending at p=63 and producing said two dimensional array of said two dimensional array frequency coefficients.

116. (Previously presented) The system of claim 115, wherein if said two dimensional array of said two dimensional array frequency coefficients comprises 8 columns of frequency coefficients and 8 rows of frequency coefficients, wherein said columns are represented with a variable n=0, 1, 2, 3, 4, 5, 6, or 7, wherein n=0 is at least one of a first or leftmost column, n=1 is a second column, n=2 is a third column, n=3 is a fourth column, n=4 is a fifth column, n=5 is a sixth column, n=6 is a seventh column, and n=7 is at least one of an eighth or rightmost column, and wherein said rows are represented with a variable m=0, 1, 2, 3, 4, 5, 6, or 7, wherein m=0 is at least one of a first or top row, m=1 is a second row, m=2 is a third row, m=3 is a fourth row, m=4 is a fifth row, m=5 is a sixth row, m=6 is a seventh row, and m=7 is at least one of an eighth or bottom row, said means for sequentially scanning said one dimensional array frequency coefficients further comprises:

means for assigning a two dimensional array frequency coefficient located at n=0 and m=0 a value of said one dimensional array frequency coefficient located at p=0;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=1 a value of said one dimensional array frequency coefficient located at p=1;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=2 a value of said one dimensional array frequency coefficient located at p=2;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=0 a value of said one dimensional array frequency coefficient located at p=3;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=1 a value of said one dimensional array frequency coefficient located at p=4;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=3 a value of said one dimensional array frequency coefficient located at p=5;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=4 a value of said one dimensional array frequency coefficient located at p=6;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=2 a value of said one dimensional array frequency coefficient located at p=7;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=0 a value of said one dimensional array frequency coefficient located at p=8;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=3 a value of said one dimensional array frequency coefficient located at p=9;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=5 a value of said one dimensional array frequency coefficient located at p=10;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=6 a value of said one dimensional array frequency coefficient located at p=11;

means for assigning a two dimensional array frequency coefficient located at n=0 and m=7 a value of said one dimensional array frequency coefficient located at p=12;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=4 a value of said one dimensional array frequency coefficient located at p=13;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=1 a value of said one dimensional array frequency coefficient located at p=14;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=0 a value of said one dimensional array frequency coefficient located at p=15;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=2 a value of said one dimensional array frequency coefficient located at p=16;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=5 a value of said one dimensional array frequency coefficient located at p=17;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=6 a value of said one dimensional array frequency coefficient located at p=18;

means for assigning a two dimensional array frequency coefficient located at n=1 and m=7 a value of said one dimensional array frequency coefficient located at p=19;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=3 a value of said one dimensional array frequency coefficient located at p=20;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=1 a value of said one dimensional array frequency coefficient located at p=21;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=0 a value of said one dimensional array frequency coefficient located at p=22;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=2 a value of said one dimensional array frequency coefficient located at p=23;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=4 a value of said one dimensional array frequency coefficient located at p=24;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=5 a value of said one dimensional array frequency coefficient located at p=25;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=6 a value of said one dimensional array frequency coefficient located at p=26;

means for assigning a two dimensional array frequency coefficient located at n=2 and m=7 a value of said one dimensional array frequency coefficient located at p=27;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=3 a value of said one dimensional array frequency coefficient located at p=28;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=1 a value of said one dimensional array frequency coefficient located at p=29;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=0 a value of said one dimensional array frequency coefficient located at p=30;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=2 a value of said one dimensional array frequency coefficient located at p=31;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=4 a value of said one dimensional array frequency coefficient located at p=32;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=5 a value of said one dimensional array frequency coefficient located at p=33;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=6 a value of said one dimensional array frequency coefficient located at p=34;

means for assigning a two dimensional array frequency coefficient located at n=3 and m=7 a value of said one dimensional array frequency coefficient located at p=35;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=3 a value of said one dimensional array frequency coefficient located at p=36;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=1 a value of said one dimensional array frequency coefficient located at p=37;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=0 a value of said one dimensional array frequency coefficient located at p=38;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=2 a value of said one dimensional array frequency coefficient located at p=39;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=4 a value of said one dimensional array frequency coefficient located at p=40;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=5 a value of said one dimensional array frequency coefficient located at p=41;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=6 a value of said one dimensional array frequency coefficient located at p=42;

means for assigning a two dimensional array frequency coefficient located at n=4 and m=7 a value of said one dimensional array frequency coefficient located at p=43;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=3 a value of said one dimensional array frequency coefficient located at p=44;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=1 a value of said one dimensional array frequency coefficient located at p=45;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=2 a value of said one dimensional array frequency coefficient located at p=46;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=4 a value of said one dimensional array frequency coefficient located at p=47;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=5 a value of said one dimensional array frequency coefficient located at p=48;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=6 a value of said one dimensional array frequency coefficient located at p=49;

means for assigning a two dimensional array frequency coefficient located at n=5 and m=7 a value of said one dimensional array frequency coefficient located at p=50;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=3 a value of said one dimensional array frequency coefficient located at p=51;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=0 a value of said one dimensional array frequency coefficient located at p=52;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=1 a value of said one dimensional array frequency coefficient located at p=53;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=4 a value of said one dimensional array frequency coefficient located at p=54;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=5 a value of said one dimensional array frequency coefficient located at p=55;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=6 a value of said one dimensional array frequency coefficient located at p=56;

means for assigning a two dimensional array frequency coefficient located at n=6 and m=7 a value of said one dimensional array frequency coefficient located at p=57;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=2 a value of said one dimensional array frequency coefficient located at p=58;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=3 a value of said one dimensional array frequency coefficient located at p=59;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=4 a value of said one dimensional array frequency coefficient located at p=60;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=5 a value of said one dimensional array frequency coefficient located at p=61;

means for assigning a two dimensional array frequency coefficient located at n=7 and m=6 a value of said one dimensional array frequency coefficient located at p=62; and

means for assigning a two dimensional array frequency coefficient located at n=7 and m=7 a value of said one dimensional array frequency coefficient located at p=63.